REMARKS

Applicant is in receipt of the Office Action mailed November 28, 2008. Claims 1, 28 and 30 have been amended. Claims 1, 4, 6, and 8-30 are pending in the case. Reconsideration of the present case is earnestly requested in light of the following remarks.

Section 103 Rejections

Claims 1, 4, 6, and 8-30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kodosky (US 6,173,438) in view of Lynggaard (US Pat. Pub. 2003/0014615).

Claims 1 recites:

1. A computer-implemented method for programming an embedded sensor device, the method comprising,

creating a graphical program, wherein the graphical program specifies a function to be performed by the embedded sensor device, wherein the embedded sensor device comprises one or more sensors, and wherein the embedded sensor device does not include a display;

storing the graphical program on a personal digital assistant (PDA); and

transmitting the graphical program from the PDA to the embedded sensor device over a serial link;

wherein after said transmitting, the embedded sensor device is operable to execute the graphical program to perform the specified function.

Applicant respectfully submits that the cited art fails to teach or suggest **wherein the graphical program specifies a function to be performed by the embedded sensor device, wherein the embedded sensor device comprises one or more sensors, and wherein the embedded sensor device does not include a display**, as recited in claim 1.

In asserting that Kodosky teaches an embedded sensor device as claimed, the Office Action cites Kodosky's data acquisition (DAQ) card, asserting that DAQ cards

commonly include sensors, citing a Wikipedia article on data acquisition. This is incorrect. As the Wikipedia article makes clear, and as is known by those of skill in the art, a DAQ card does not have "sensors thereon", contrary to the Examiner's assertion. Rather, as stated in the Wikipedia article,

> A transducer is a device that converts a physical property or phenomenon into a corresponding measurable electrical signal, such as voltage, current, change in resistance or capacitor values, etc. The ability of a data acquisition system to measure different phenomena depends on the transducers to convert the physical phenomena into signals measurable by the data acquisition hardware. Transducers are synonymous with sensors in DAQ systems.

and

> ...DAQ hardware is what usually interfaces between the signal and a PC....

In other words, a sensor produces signals based on some physical phenomenon, and a DAQ card acquires the signals and sends them to a computer for storage, processing, or analysis.

Kodosky is directed to deploying a block diagram of a graphical program onto an embedded device (without a display) coupled to a computer, where during execution of the block diagram on the embedded device, a front panel or graphical interface of the graphical program executes on the computer, thereby providing an interface to the embedded device, which otherwise has no graphical interface means. Kodosky is silent regarding sensors.

While Kodosky's embedded device is described as having no display, nowhere is Kodosky's embedded device described as including one or more sensors, and so does not teach the embedded sensor device of claim 1. Thus, Kodosky does not, and cannot, disclose a graphical program that specifies a function to be performed by such an embedded sensor device.

After asserting that DAQ cards (such as Kodosky's) commonly include sensors, which is not the case, the Office Action admits that Kodosky fails to disclose an embedded sensor device as claimed, but then asserts that Lynggaard remedies this admitted deficiency of Kodosky. Applicant respectfully disagrees.

Per cited paragraphs 12, 59, and 61, and Lynggaard in general, Lynggaard is directed to controlling a device with a processor, such as a computer, via a "base" and "sensor device", where the user writes or draws on the base, e.g., a sheet of paper, with the sensor device, and where the sensor device records or digitizes the user's writing or drawing strokes as sequences of coordinate pairs. The digitized strokes form "graphical notations" that may represent commands for the computer, and which are transmitted to the device to control it, via wired or wireless means, possibly via an intervening communication device, such as a PDA or mobile computer.

Applicant respectfully submits that Lynggaard is non-analogous art with respect to claim 1. For example, Lynggaard does not mention a graphical program at all, nor, more specifically, storing a graphical program on a PDA. Note, for example, that the "graphics program" of Lynggaard is not a graphical program as described and claimed by Applicant, but rather is a program on the computer for displaying image data (the sketch), i.e., a graphics file, generated by the user drawing or writing on the base, e.g., by making strokes on a piece of paper with a "smart pen". The strokes or glyphs made by the user are sent as image data, i.e., a graphics file, to the computer (a graphics program running on the computer) and are interpreted as commands. Note, however, that these commands are decidedly *not* graphical programs, as is well known to those of skill in the art of graphical programming. For example, note that in paragraph [0114], Lynggaard discusses the computer identifying a command received from the pen by "converting the graphical notation into a machine readable character format by e.g. ICR (intelligent character recognition) or HWR (handwriting recognition), based on the output from step 51a, whereupon the command may be identified in step 51b. Thus, a command that is written in plain text may be identified, either directly from the actual combination of machine readable characters, or by retrieving a related command from a database on the basis of the character combination. Likewise, the sensor device may be arranged to identify an address from such a character combination (step 52)."

Thus, Lynggaard does not teach a graphical program, specifically where the graphical program specifies a function to be performed by an embedded sensor device that includes one or more sensors. Rather, Lynggaard teaches a pen/sensor sending individual commands to a computer, possibly via an intermediary communication device,

e.g., a PDA. Nor does Lynggaard teach storing a graphical program on a personal digital assistant (PDA), at least because Lynggaard's commands are not equivalent to a graphical program, and because Lynggaard's PDA is only used as a communication device to facilitate transmission of the image data (which is not a graphical program) to the computer.

Thus, the cited art fails to teach or suggest these features of claim 1.

The cited art also fails to teach or suggest **transmitting the graphical program from the PDA to the embedded sensor device over a serial link; wherein after said transmitting, the embedded sensor device is operable to execute the graphical program to perform the specified function**, as recited in claim 1.

The Office Action asserts that Kodosky discloses these features, citing Figures 6-9, col.14:58-67, and col.16:45, 46, 53-55.

These citations disclose creating and compiling a graphical program, deploying the block diagram and front panel (GUI) of the graphical program to an embedded device and a computer, respectively, and executing accordingly, where during execution, the front panel executing on the computer communicates with the block diagram executing on the embedded device via a front panel protocol, thereby providing a GUI for the executing block diagram.

However, nowhere do these citations disclose transmitting the graphical program from a PDA (where it was stored) to an embedded sensor device over a serial link, after which the embedded sensor device is operable to execute the graphical program to perform the specified function. Note that Kodosky never mentions a PDA, nor storing a graphical program on a PDA, nor transmitting a graphical program from a PDA to an embedded sensor device.

Nor does Lynggaard teach these features.

For example, note that Lynggaard doesn't disclose a graphical program, nor transmitting a graphical program from a PDA to an embedded sensor device for execution. Applicant notes that Lynnggaard sends graphics data (that represents commands, but which is certainly not a graphical program as claimed) to a computer, possibly via an intermediate PDA that serves as a wireless communication device, where

the computer analyzes the image data to identify commands which it then executes. Lynggaard's sensor device does not receive or execute a graphical program. Thus, Lynggaard actually teaches away from the invention of claim 1, and so is not properly combinable with Kodosky.

Applicant further submits that a proper reason to combine has not been presented. For example, the suggested reason: "because Lynggaard solves the problem of controlling a unit provided with a processor and to a device a computer program product and product kit for the same purpose [sic]", is not only vague and confusing, but is also not germane to the particular invention recited in claim 1, having nothing whatsoever to do with graphical programs, nor PDAs, nor transmitting a graphical program from a PDA to an embedded sensor device for execution, and so Lynggaard is not properly combinable with Kodosky to make a prima facie case of obviousness.

Moreover, even were Lynggaard and Kodosky properly combinable, which Applicant argues they are not, the resulting combination would still not produce Applicant's invention as claimed, as explained at length above.

Thus, for at least the above reasons Applicant respectfully submits that the cited art fails to teach or suggest all the features and limitations of claim 1, and so claim 1, and those claims respectively dependent therefrom are patentable distinct and nonobvious over the cited art, and are thus allowable.

Independent claims 28, and 30 each includes similar limitations as claim 1, and so the above arguments apply with equal force to these claims. Moreover, claim 30 includes the additional limitations of analyzing the graphical program, and converting the graphical program for transmission to the sensor interface device, which are certainly not taught by the cited art. Nor does the cited art teach a sensor interface device executing the converted graphical program and a hand-held computer receiving data from the sensor interface device during execution of the converted graphical program, and displaying the received data on the display of the hand-held computer, as claimed.

Claim 29 also includes many of the novel limitations of claim 1, but doesn't limit the program to a graphical program. Thus, relevant arguments presented with respect to claim 1 also apply to claim 29.

Thus, for at least the above reasons, Applicant submits that claims 28, 29, and 30, and those claims respectively dependent therefrom, are patentably distinct and non-obvious over the cited art, and are thus allowable.

Applicant also asserts that numerous ones of the dependent claims recite further distinctions over the cited art.

For example, nowhere does the cited art teach or suggest **wherein the embedded sensor device comprises a compact embedded sensor device between approximately 3cm x 3cm and approximately 6cm x 6cm**, as recited in claim 4.

The Office Action admits that Kodosky fails to disclose this feature, but asserts that any size of an embedded sensor device is inherently obvious. This is incorrect. Applicant respectfully submits that miniaturization of embedded sensor devices is an active research and development area, requiring significant technical design and manufacturing skills, and that such a size limitation on implementing the claimed functionality is neither easy to achieve nor obvious.

Thus, for at least the above reasons Applicant respectfully submits that the cited art fails to teach or suggest all the features and limitations of claim 4, and so claim 4, and those claims respectively dependent therefrom are patentable distinct and nonobvious over the cited art, and are thus allowable.

As another example, nowhere does the cited art teach or suggest **wherein said creating the graphical program is performed on the PDA**, as recited in claim 6.

Cited col.7-8 discloses exemplary instrumentation control and industrial automation systems, and col.23:16-22 recites standard broadening language regarding alternative, modifications, and equivalents of Kodosky's invention, but in no way discloses nor anticipates this feature. Applicant submits that it is improper for the Examiner to attempt to read in specific claimed features into the prior art without clear support or evidence.

Thus, the cited art does not teach creating the graphical program on the PDA itself, as claimed.

Thus, for at least the above reasons Applicant respectfully submits that the cited art fails to teach or suggest all the features and limitations of claim 6, and so claim 6, and those claims respectively dependent therefrom are patentable distinct and nonobvious over the cited art, and are thus allowable.

Nor does the cited art teach or suggest **analyzing the graphical program for function dependencies to generate required modules; analyzing the graphical program to determine an execution sequence; and generating a flatfile based on the required modules and execution sequence, wherein the flatfile contains the functionality of the graphical program**, as recited in claim 13.

Cited Figure 6 is a flowchart diagram illustrating creation of an embedded graphical program. Nowhere does Figure 6, nor the related text, nor the cited art in general, mention analyzing a graphical program for function dependencies at all, much less doing so to generate required modules, nor analyzing the graphical program to determine an execution sequence, nor generating a flatfile based on the required modules and execution sequence. In fact, no mention is made in either reference of a flatfile at all.

Thus, for at least the above reasons Applicant respectfully submits that the cited art fails to teach or suggest all the features and limitations of claim 13, and so claim 13, and those claims respectively dependent therefrom are patentable distinct and nonobvious over the cited art, and are thus allowable.

As further examples, nowhere does the cited art teach or suggest **transmitting the flatfile to the embedded sensor device over the serial link**, as recited in claim 14, nor **the embedded sensor device processing the flatfile to generate an executable**, as recited in claim 15.

As mentioned above, neither reference even mentions a flatfile, and so the cited art does not, and cannot, teach these features. For example, cited Figure 7 of Kodosky makes no mention of a flatfile, nor an embedded sensor device processing a flatfile to generate an executable. The Office Action asserts that Lynggaard teaches a flatfile in paragraph [0104]. This is incorrect. A graphics file, i.e., image data, is not a flatfile, as one of skill in the programming arts readily understands.

Thus, for at least the above reasons Applicant respectfully submits that the cited art fails to teach or suggest all the features and limitations of claims 14 and 15, and so claims 14 and 15, and those claims respectively dependent therefrom are patentable distinct and nonobvious over the cited art, and are thus allowable.

Applicant also asserts that numerous other ones of the dependent claims recite further distinctions over the cited art. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

Removal of the section 103(a) rejection of claims 1, 4, 6, and 8-30 is respectfully requested.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above-referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. The Commissioner is hereby authorized to charge any fees which may be required or credit any overpayment to Meyertons, Hood, Kivlin, Kowert & Goetzel P.C., Deposit Account No. 50-1505/5150-80501/JCH.

Also filed herewith are the following items:

☐ Request for Continued Examination

☐ Terminal Disclaimer

☐ Power of Attorney By Assignee and Revocation of Previous Powers

☐ Notice of Change of Address

☐ Other:

Respectfully submitted,

/Jeffrey C. Hood/
Jeffrey C. Hood, Reg. #35198
ATTORNEY FOR APPLICANT(S)

Meyertons, Hood, Kivlin, Kowert & Goetzel PC
P.O. Box 398
Austin, TX 78767-0398
Phone: (512) 853-8800
Date: 2009-01-27 JCH/MSW